

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 January 2005 (27.01.2005)

PCT

(10) International Publication Number
WO 2005/007284 A3

- (51) International Patent Classification⁷: **G01N 13/00**, **A61K 49/18**, **B01J 13/02**, **A61K 9/51**
- (21) International Application Number:
PCT/GB2004/003103
- (22) International Filing Date: **16 July 2004 (16.07.2004)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
0316675.8 **16 July 2003 (16.07.2003)** **GB**
0330113.2 **29 December 2003 (29.12.2003)** **GB**
- (71) Applicants (for all designated States except US): **THE UNIVERSITY OF READING [GB/GB]**; P.O. Box 217, Whiteknights, Reading, Berkshire RG6 6AH (GB). **ASTRAZENECA AB [SE/SE]**; S-151 85, S-Sodertalje (SE). **GAO, Xin [CN/GB]**; c/o School of Chemistry, University of Reading, Reading Berkshire RG6 6AD (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **TSANG, Shik, Chi [GB/GB]**; c/o School of Chemistry, University of Reading, Reading, Berkshire RG6 6AD (GB). **TAM, Kin, Yip [GB/GB]**; c/o AstraZeneca, Mereside, Alderley Park, Macclesfield, Cheshire SK10 4TG (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GI, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.**
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): **ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW)**, Eurasian (**AM, AZ, BY, KG, KZ, MD, RU, TJ, TM**), European (**AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR**), OAPI (**BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG**).
- Published:
— with international search report
- (88) Date of publication of the international search report:
16 June 2005
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **COMPOSITE NANOPARTICLES**

(57) Abstract: The method of measuring the partition coefficient of a test molecule comprises incorporating the molecule in a composition of nanoparticles having a porous surface and a first solvent, wherein a second solvent has been absorbed into the porous surface, and said first solvent is immiscible with said second solvent, and then separating the nanoparticles and the first solvent. The amount of the molecule which remains in the first solvent is determined to enable calculation of the partition coefficient. The nanoparticles may have a magnetic core to allow easy separation.

WO 2005/007284 A3